

AMENDMENTS TO THE CLAIMS:

Complete Listing of Claims

1 1. (currently amended) An apparatus for switching communication
2 data cells for a plurality of communication ports in a communication network,
3 said apparatus comprising:

4 a register block coupled to a first interconnect bus and having a memory
5 for storing a connection setup notification;

6 a scheduler module coupled to said first interconnect bus and operably
7 configured to determine scheduling of communication data cell transmissions to
8 said communication ports;

9 a connection state unit coupled to a second interconnect ~~interconnect~~ bus
10 and having a memory for storing connection information;

11 a look-up table coupled to said first interconnect bus and having a
12 memory for storing a cross reference of a path identifier and an index into said
13 connection state unit;

14 a processing unit coupled to said first interconnect bus for communication
15 to said scheduler, said register block and said look-up table, and is operably
16 configured to couple to said second interconnect bus for communication to said
17 connection ~~connector~~ state unit and said communication ports, said processing
18 unit is further operably configured to transmit communication data cells between
19 communication ports based on information collected from said register block,
20 said look-up table, said connection state unit, and said scheduler module; and

21 a program memory unit coupled to said processing unit and having a
22 memory for storing instructions ~~instruction~~ executable by said processing unit.

- 1 2. (currently amended) The apparatus of Claim 1, wherein said program
2 memory unit is further coupled to a host processor, wherein said host processor
3 supplies said executable instruction to said program memory unit ~~memory~~.
- 1 3. (original) The apparatus of Claim 1, wherein said scheduler module is
2 provided in hardware.
- 1 4. (original) The apparatus of Claim 1, wherein said processing unit comprises
2 a packed data structure processor.
- 1 5. (original) The apparatus of Claim 1, wherein said connection information
2 stored in said connection state unit includes traffic type, source and destination
3 port identification and transmission parameters.
- 1 6. (original) The apparatus of Claim 5, wherein said transmission parameters
2 include virtual path translation information, cell rates for programming said
3 scheduler module, and operation and maintenance configuration parameters.
- 1 7. (original) The apparatus of Claim 1, wherein said processing unit is further
2 operably configured to perform quality of service type functions based on a
3 predetermined traffic contract.
- 1 8. (original) The apparatus of Claim 1, wherein said scheduler is implemented
2 in hardware managed by said processing unit writing to command registers
3 associated with said scheduler.
- 1 9. (currently amended) The apparatus of Claim 1 wherein said processing
2 unit is further operably configured to execute Virtual Path Identifier/Virtual
3 Channel Identifier (VPI/VCI) look-ups.

1 10. (original) The apparatus of Claim 1 wherein said processing unit is further
2 operably configured to set-up and tear-down a connection.

1 11. (currently amended) The apparatus of Claim 1 wherein said processing
2 unit is further operably configured to execute Virtual Paths/Virtual Channels
3 (VP/VC) translation.

1 12. (original) The apparatus of Claim 1 wherein said processing unit is further
2 operably configured to execute traffic shaping.

1 13. (original) The apparatus of Claim 1 wherein said processing unit is further
2 operably configured to execute operation and maintenance processing.

1 14. (original) The apparatus of Claim 1 wherein said processing unit is further
2 operably configured to update ATM layer statistics.

1 15. (currently amended) A system for switching communication data cells for a
2 plurality of communication ports in a communication network, said system
3 comprising:

4 a register block coupled to a first interconnect bus and having a memory
5 for storing a connection setup notification;

6 a scheduler module coupled to said first interconnect bus and operably
7 configured to determine scheduling of communication data cell transmissions to
8 said communication ports;

9 a connection state unit coupled to a second interconnect bus and having
10 a memory for storing connection information;

11 a look-up table coupled to said first interconnect and having a memory for
12 storing a cross reference of a path identifier and an index into said connection
13 state unit;

14 a processing unit coupled to said first interconnect bus for communication
15 to said scheduler, said register block and said look-up table, and is operably
16 configured to couple to said second interconnect bus for communication to said
17 connection ~~connector~~ state unit and said communication ports, said processing
18 unit is further operably configured to transmit communication data cells between
19 communication ports based on information collected from said register block,
20 said look-up table, said connection state unit, and said scheduler module;

21 a host interface unit for interfacing a host processor with said connection
22 state unit and said register block, wherein said connection setup notification is
23 loaded into said register block from an indication from said host processor, and
24 wherein said connection information is loaded into said connection state unit
25 from an indication from said host processor; and

26 a program memory unit coupled to said processing unit and having a
27 memory for storing instructions executable by said processing unit.

1 16. (currently amended) The system of Claim 15, wherein said program
2 memory unit is further coupled to said host processor, wherein said host
3 processor supplies said executable instruction to said program memory unit
4 memory.

1 17. (original) The system of Claim 15, wherein said scheduler module is
2 provided in hardware.

1 18. (original) The system of Claim 15, wherein said processing unit comprises a
2 packed data structure processor.

1 19. (original) The system of Claim 15, wherein said connection information
2 stored in said connection state unit includes traffic type, source and destination
3 port identification and transmission parameters.

1 20. (currently amended) The system of Claim 19 ~~45~~, wherein said
2 transmission parameters include virtual path translation information, cell rates for
3 programming said scheduler module, and operation and maintenance
4 configuration parameters.

1 21. (original) The system of Claim 15, wherein said processing unit is further
2 operably configured to perform quality of service type functions based on a
3 predetermined traffic contract.

1 22. (original) The system of Claim 15, wherein said scheduler is implemented in
2 hardware managed by said processing unit writing to command registers
3 associated with said scheduler.

1 23. (currently amended) The system of Claim 15, wherein said processing unit
2 is further operably configured to execute Virtual Path Identifier/Virtual Channel
3 Identifier (VPI/VCI) look-ups.

1 24. (original) The system of Claim 15, wherein said processing unit is further
2 operably configured to set-up and tear-down a connection.

1 25. (currently amended) The system of Claim 15, wherein said processing unit
2 is further operably configured to execute Virtual Paths/Virtual Channels (VP/VC)
3 translation.

1 26. (original) The system of Claim 15, wherein said processing unit is further
2 operably configured to execute traffic shaping.

1 27. (original) The system of Claim 15, wherein said processing unit is further
2 operably configured to execute operation and maintenance processing.

1 28. (original) The system of Claim 15, wherein said processing unit is further
2 operably configured to update ATM layer statistics.